

**United States Department of the Interior
Bureau of Land Management**

Arizona Strip Field Office

Environmental Assessment

Moonshine Allotment Grazing Permit Renewal

EA-AZ-110-2005-0049

I. INTRODUCTION

This Environmental Assessment (EA) analyzes the proposed grazing permit renewal for the Moonshine allotment. The action culminates an evaluation conducted on the allotment under the Arizona BLM Standards for Rangeland Health and Guidelines for Grazing Management (S&Gs). In addition, this EA looks at the present Allotment Management Plan (AMP), and determines if current grazing management practices would maintain desirable conditions and continue to allow improvement of public land resources, or if changes in grazing management for the Moonshine allotment are necessary. This EA is intended to evaluate the findings of the Moonshine assessment as it relates to vegetation conditions and resource values in the allotment. This is done in an effort to balance demands placed on the resources by various authorized uses within the allotment.

Analysis of existing allotment data indicates that ecological condition trends and pace-frequency trends are static or improving. It was determined by the Interdisciplinary Assessment Team (IAT) during the assessment process, that resource conditions on the allotment are meeting Standards for Rangeland Health.

Purpose and Need

The purpose and need of this action is to renew the grazing permit associated with the Moonshine Grazing Allotment (#5237). The Moonshine Grazing Allotment is located 25 miles south of Fredonia Arizona, in the northern portion of Arizona on lands managed by the Arizona Strip Field Office.

Conformance with Land Use Plan

This proposal is found to be in conformance with the Arizona Strip District Resource Management Plan (RMP) dated January 1992, as amended April 1997. The RMP adopted resource specific activity plans from the Vermillion Grazing EIS (April, 1979), including allotment management plans. The Vermillion Grazing EIS proposed that the Moonshine allotment should continue to be managed under the implemented grazing system

This action is in conformance with Arizona's Standards and Guides, which were developed through a collaborative process involving the Arizona Resource Advisory Council and the Bureau of Land Management State Standards and Guides Team. The Secretary of the Interior approved the Standards and Guides in April 1997. The Decision Record, signed by the BLM State Director (April 1997) provided for full implementation of the Standards and Guides in all Arizona Land Use Plans.

This proposal was initially scoped and found to be consistent with the Arizona Strip District Resource Management Plan (RMP) dated January 31, 1992, as amended April 1997. The following decisions from the Arizona Strip RMP apply to the proposal:

- GZ-20 Establish Utilization levels not to exceed 50 percent of average on current years growth of key species.
- TE01 Manage areas consistent with multiple use to conserve candidate species and their habitats and ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as threatened or endangered. Adverse impacts to listed species will be avoided.
- WS01 Manage vegetation cover towards ecological stability and sound long-term protective soil cover using mechanical, chemical, biological or fire methods as tools for accomplishment.
- WS16 Develop management prescriptions or improvement practices to achieve desired plant community objectives.
- WS21 Manage watershed areas according to watershed categorizations to achieve identified objectives.
- WL02 Maintain productive wildlife habitat and ensure wildlife needs and considerations are incorporated into land use planning . . . and management decisions.
- WL16 Complete ecological site inventories in key areas to determine site potentials and present ecological conditions; establish desired plant community objectives for various areas and include these objectives in Allotment Management Plans, Habitat Management Plans, watershed plans, and other plans in order to prescribe management or improvement practices to achieve these objectives.
- WL18 Manage identified pronghorn antelope habitat through the Habitat Management Plan process to achieve and maintain optimum numbers and distribution in the Clayhole Valley. Initial population management levels are 400 head in Clayhole Valley. The intent is to have self-sustaining pronghorn herds.

WL19 Implement, in cooperation with Arizona Game and Fish Department, studies to determine factors limiting pronghorn antelope in the Clayhole area and actions that can be taken to produce the desired numbers of pronghorn. Similar studies in House Rock Valley may also include the U.S. Forest Service.

Relationships to Statutes, Regulations, or other Plans

Grazing permit renewals are provided for in 43 CFRs 4100 where the objectives of regulations are“....to promote healthy, sustainable rangeland ecosystems; to accelerate restoration and improvement of public rangelands to properly functioning conditions; to promote the orderly use,....; to establish efficient and effective administration of grazing of public rangelands;....”, and as provided for in the Land Use Plans in accordance with multiple-use objectives, requirements and provisions of established laws, regulations and BLM policies incorporating Desired Plant Community (DPC) objectives using the Ecological Site Index approach.

Grazing management practices on the Moonshine Allotment are in conformance with Arizona Standards for Rangeland Health and Guidelines for Grazing Administration. These practices are intended to assist management in meeting the Standards for Rangeland Health.

Renewal of the Moonshine grazing permit conforms to the President’s National Energy Policy and would not have adverse energy impacts. This action would not deny energy projects, withdraw lands, close roads or in any other way deny or limit access to mineral materials to support energy actions.

The proposed action described and analyzed in this document is in compliance with the Endangered Species Act of 1973 as Amended, section 106 of the National Historic Preservation Act of 1966, the Archaeological Resources Protection Act of 1979, the Federal Land Policy and Management Act of 1976, the National Environmental Policy Act of 1969 and State of Arizona regulations regarding air quality.

Issues raised relating to Standards for Rangeland Health

The issues relating to rangeland health were identified by the Rangeland Resources Team (RRT), Interdisciplinary Assessment Team (IAT), and livestock permittee during the Moonshine allotment scoping meeting on January 14, 2003 and a field visit on June 18, 2003. Conclusions to these issues can be found in the Moonshine Standards and Guidelines Assessment Report. The issues identified through the process described above were:

a. Noxious Weeds; Scotch Thistle

There is a small patch of Scotch thistle (20 plants) in the far Southwest corner of the Heaton-Findlay pasture. Past treatment work has kept the infestation from spreading beyond its existing location. There are no live plants that presently exist.

b. Lack of fawning cover at the reservoir in the southern tip of the allotment

Heaton Reservoir is located in the southeast corner of this allotment and lies against the eastern allotment boundary fence. The land to the west of the reservoir in the Moonshine Allotment for 100 yards consists of a hard pan playa where water puddles up and ponds for a period of time which also kills the vegetation (It has been documented several times, after heavy rains caused the water to form a lake for several days). As a result very little vegetative cover is present, mainly annuals and weeds. During the field trip it was pointed out that overland flow of sediment from the uplands has been deposited near the reservoir and contributed to the size of the weed dominated area (approximately 2-acres)

Research has shown that cover within one-half mile of water is important for the survival of newly born pronghorn fawns. Lactating does leave their fawns to feed and to obtain water, but prefer to select fawning sites not far from water. By doing so, they will not be gone from their fawn(s) for long periods of time. Where there is little cover, the fawns lying on the ground are susceptible to predation by coyotes. However, water is rarely available at this reservoir and there are other places nearby that are ideal where fawning can occur with proper vegetation and height structure. This particular reservoir apparently plays a very small role in providing the needs of the areas pronghorn.

Current Planning Process

The Arizona Strip Field Office is currently involved in a planning process that would result in 3 stand alone RMPs, one for each new National Monument and one for the Arizona Strip Field Office on the outside of the monuments. No grazing changes are currently anticipated for the Moonshine allotment. However, there may be modifications as a result of the new RMPs. The 10-year grazing permit, in part, states “This permit is subject to (A) modification, suspension or cancellation as required by land plans and applicable law; (B) annual review and to modification of terms and conditions as appropriate; ...”. BLM may use these permit conditions to implement any changes required under the new RMPs.

II. PROPOSED ACTION AND ALTERNATIVES

Proposed Action (Renewal of 10 Year Grazing Permit)

The Proposed Action is to renew the grazing permit for the Moonshine allotment for a period of ten years with current terms and conditions. Renewal of the 10 year grazing permit proposes no change from the present grazing permit. Livestock numbers would be limited to the current active preference. Livestock grazing would be in accordance with existing AMP. New range improvements to assist in grazing practices and promote rangeland health would be considered through the NEPA process.

The Moonshine Allotment Management Plan(AMP) consists of the following grazing system.

Three-pasture deferred rotation system, with each pasture receiving four months grazing at different times and eight months rest each year (Moonshine, Sims and Heaton-Findlay Pastures).

During the summer months (June thru October) some of the permitted livestock numbers are removed voluntarily and taken to a mountain summer range. This provides additional rest during the growing season. This will help increase plant vigor, density, litter, seed production, and cover.

Grazing Preference and Current Use on the Allotment:

<u>Livestock Numbers</u>	<u>Season of Use</u>	<u>% Federal</u>	<u>Active AUMs</u>
72 Cattle	3/1 to 2/28	95%	824

Voluntary non-use has varied from 18 to 497 AUMs per year, since 1985. Non-use reflects seasonally dry periods, drought years or other factors.

Alternatives Considered But Rejected For Further Analysis

Alternatives are tiered to the Arizona Strip District RMP (January, 1992) and the Vermillion Grazing EIS (April, 1979) which was adopted into the RMP and are basically the same for this action. The Grazing EIS addressed these alternatives: Full Stocking with Management, Stocking Level by Condition Class, No Vegetation Manipulation, elimination of Grazing on Public Lands, Less Intensive Management of Livestock Grazing and No Action.

The following alternatives were considered for this EA but rejected because they were analyzed in the RMP, to which this document is tiered.

- **Full Stocking with Management alternative** would allow stocking at the estimated livestock carrying capacity of each allotment but otherwise would provide the same management as the proposed action for this allotment, which is intensive management as one of 40 allotments and less intensive management on 10 other allotments.
- **Stocking Level by Condition Class alternative** would set the stocking level based on the average condition and apparent trend of the allotment.
- **No Grazing Alternative (Elimination of Livestock Grazing on Public Lands).** The decision to authorize livestock grazing in this area and specifically on the Moonshine allotment is documented in the approved land use plan. The absence of new information or other land use plan decisions showing that continued livestock grazing would preclude BLM from meeting or making significant progress toward achieving land health standards renders the existing land use plan authorizing grazing valid. A no grazing alternative or not renewing a grazing permit would not conform to the land use plan. A plan amendment would be required before closing an allotment to livestock grazing.

Terms and Conditions of Grazing Permit

Grazing would be in accordance with the Moonshine AMP, signed January 16, 1985. Billing for grazing use would be based on the actual use report which is due on or before March 15 each year. Livestock may be moved up to 15 days before or after scheduled move dates

Desired Plant Community (DPC)

This EA also incorporates by reference the "Implementation of Standards for Rangeland Health and Guidelines for Grazing Administration, Moonshine Allotment S&G Assessment" (2003)¹. The Moonshine Allotment Assessment lists and evaluates achievement of the allotments DPC objectives summarized below. These objectives are expressed in species composition by weight.

Key areas 1 thru 3 are actually part of another allotment and not addressed here.

Desired Plant Community (DPC) key areas #4 (Sandy Loam Upland 7-11" pz)

- < Maintain ecological condition in Late Seral through 2030 by,
- < Maintaining the browse/shrub composition between 20-50% through 2030
- < Maintaining the grass composition between 40-70% through 2030
- < Maintaining the forb composition between 1-10% through 2030

Desired Plant Community (DPC) key areas #5 (Sandy Loam Upland 7-11" pz)

- < Maintain ecological condition in Late Seral through 2030 by,
- < Maintaining the browse/shrub composition between 20-50% through 2030
- < Maintaining the grass composition between 40-70% through 2030
- < Maintaining the forb composition between 1-10% through 2030

Desired Plant Community (DPC) key areas #6 (Limy Slopes 10-14" pz)

- < Maintain ecological condition in Late Seral through 2030 by,
- < Maintaining the browse/shrub composition between 25-40% through 2030
- < Maintaining the grass composition between 50-70% through 2030
- < Maintaining the forb composition between 1-10% through 2030

Desired Plant Community (DPC) key areas #7 (Limy Slopes 10-14" pz)

- < Maintain ecological condition in Late Seral through 2030 by,
- < Maintaining the browse/shrub composition between 25-40% through 2030

¹Moonshine Allotment S&G Assessment, available at the Bureau of Land Management, Arizona Strip Field Office, 345 E. Riverside Drive, St. George, Utah 84790.

- < Maintaining the grass composition between 50-70% through 2030
- Maintaining the forb composition between 1-10% through 2030

Desired Plant Community (DPC) key areas #8 (Limy Slopes 10-14" pz)

- < Maintain ecological condition in Late Seral through 2030 by,
- < Maintaining the browse/shrub composition between 25-35% through 2030
- < Maintaining the grass composition between 50-70% through 2030
- Maintaining the forb composition between 1-10% through 2030

Desired Plant Community (DPC) key areas #9 (Shallow Loamy 7-11" pz)

- < Maintain ecological condition in Late Seral through 2030 by,
- < Maintaining the browse/shrub composition between 20-35% through 2030
- < Maintaining the grass composition between 50-70% through 2030
- Maintaining the forb composition between 1-10% through 2030

Monitoring

The goals of monitoring are to determine if the fundamentals or conditions of Rangeland Health are being met within the AMP area under 43 CFR 4180. These conditions of Rangeland Health are:

- (a) Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, riparian-wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage, and the release of water that are in balance with climate and land form and maintain or improve water-quality, water quantity, and timing and duration of flow.
- (b) Ecological processes, including the hydrologic cycle, nutrient cycle, and energy flow, are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.
- (c) Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving, established BLM management objectives such as meeting wildlife needs.
- (d) Habitats are, or are making significant progress toward being restored or maintained for Federal threatened and endangered species, Federal Proposed, Category 1 and 2 Federal candidate and other special status species.

To monitor rangeland health conditions, key areas as defined in the *Monitoring* "Planning for Monitoring", "TR 4400-1", (1984) would be used. The key area would be used as an indicator area to reflect what is happening on the terrain they represent, subsequent of on-the-ground

management. Each key area would be established based on a Range Site/Ecological Site (developed by the Natural Resource Conservation Service, (NRCS)) with a specific Potential Natural Community (PNC) and specific physical site characteristics. Knowing the PNC of the area, and using the ecological site descriptions as a guide, DPC objectives can be developed. The DPC then becomes the objectives by which management actions would be measured.

Dry Weight Ranking (DWR) studies would be used to measure attainment of the key area DPC objectives. In addition, Pace Frequency studies would be used at each key area to detect changes of individual species which determines a trend or change in vegetation composition. Pace Frequency and DWR would be completed on each key area every 3-6 years. DWR and Pace Frequency study methodologies are described in *Sampling Vegetation Attributes*, "Interagency Technical Reference 1734-4" (1996).

Livestock use on forage plants would be determined by conducting grazing utilization studies using the Grazed-Class Method as described in the *Utilization Studies and Residual Measurements* "Interagency Technical Reference 1734-3" (1996). Utilization studies would be completed annually by BLM, when livestock are removed from the pasture. Study data would be compiled each year. Other information to be collected and compiled is precipitation, actual use, etc. All monitoring data would be used to evaluate current management and assist BLM in making management decisions that helps achieve vegetation objectives on the allotment.

Based on analyses of the allotment's monitoring data and supporting documentation contained in the Moonshine S&G Assessment Report (2003), resource conditions on the allotment meet all applicable standards for rangeland health.

III. AFFECTED ENVIRONMENT

The following critical elements of the human environment are not affected by the proposed action or alternatives or are not present on this allotment:

- Air Quality
- ACECs
- Native American Religious Concerns
- Wastes (hazardous or solid)
- Water (quality and quantity of surface/underground supplies)
- Prime or unique farmlands
- Floodplains
- Environmental Justice
- Wetlands/Riparian Areas
- Wild & Scenic Rivers
- Wilderness
- Wild Horses and Burros
- Minerals

The affected environment is tiered to the Arizona Strip District RMP (January 31, 1992), Affected Environment pages III-1 to III-58, and pages 41 to 92 of the Vermillion Grazing EIS (April, 1979) which was adopted into the RMP and are essentially the same for this action. Chapter 2 of the Vermillion Grazing EIS describes the environmental components likely to be impacted by the proposed action. Environmental components discussed in the EIS that might affect or be affected by the proposal are: Climate, Vegetation, Water Sources, Threatened and Endangered Species, Wildlife, BLM Sensitive and State Species of Concern, Soils, Lithology, Cultural/Historical, Visual Resources, Livestock Grazing, Recreation Resources, Socioeconomics and Noxious Weeds.

This EA also incorporates by reference the “Implementation of Standards for Rangeland Health and Guidelines for Grazing Administration, Moonshine Allotment S&G Assessment” (2003)². The Moonshine Allotment S&G Assessment describes the resources and issues applicable to the allotment area.

The Arizona Strip Field Office is located in the northwest portion of Arizona. The topography is open, semiarid range with a gently (1-10%) sloping, rolling, or flat terrain. Elevation ranges from 4800 to 5800 feet, temperatures average 20 degrees in the winter and 80 degrees in the summer, and precipitation averages 8-15 inches annually. A general description of the affected environment may be found in the FEIS. Site specific components which could be affected by the proposal are as follows:

Climate

The Moonshine allotment falls within the Heaton Knolls precipitation (ppt.) zone. Precipitation on the allotment is most represented by the Heaton Knolls precipitation rain gauge located in T37N, R6W, Sec. 33, on the Southwest side of the allotment. Average precipitation is 9.98" annually. Approximately 15% (1.50") comes in the fall, 21% (2.09") in the winter, 21% (2.10") in the spring and 43% (4.29") in the summer.

Vegetation

There are three principal vegetative types³ within the allotment: Grassland, sagebrush, and pinyon-juniper.

- The grassland type consists of plant species such as blue grama, galleta grass, squirrel tail needle ‘n’ thread, red three-awn and Indian ricegrass.
- The sagebrush type includes big sagebrush, squirrel tail, blue grama, sand dropseed, mormon tea, yellow rabbitbrush, winterfat and fourwing saltbush.

² Moonshine Allotment S&G Assessment, available at the Bureau of Land Management, Arizona Strip Field Office, 345 E. Riverside Drive, St. George, Utah 84790.

³ Vermillion Grazing Environmental Impact Statement

- The pinyon-juniper type includes pinyon, juniper, sagebrush, fourwing saltbush, desert holly, blue grama, and squirrel tail.

These vegetative types make up the different ecological sites⁴ that are part of the Major Land Resource Units, as defined by the NRCS. The dominant ecological sites on the Moonshine allotment are: Sandy Loam Upland, Limy Slopes and Shallow Loamy.

Water Sources

The Moonshine allotment contains:

- 1 livestock/wildlife catchment
- 6 unfenced reservoirs

All of the above artificial man made water sources are available to wildlife, although some of them may not actually hold water yearlong. All of the water rights are held by the permittee. The catchment is cooperatively maintained by the permittee. It is a requirement of the agreements to make the water accessible to wildlife, for the time that water is available. There and no competition for water between wildlife and livestock at the artificial water sources.

Threatened and Endangered (T&E) Species

There are no areas considered to be habitat or potential habitat for any listed threatened or endangered species on this allotment. However, bald eagle (*Haliaeetus leucocephalus*), California condor (*Gymnogyps californianus*), and peregrine falcon (*Falco peregrinus alatum*) may occasionally fly over the area. There are no riparian areas that would provide foraging habitat for peregrine falcon, bald eagle, or southwestern willow flycatcher (*Empidonax trailii extimus*). An experimental non-essential population (as defined under section 10J of the Endangered Species Act) of California condors was established on the Vermillion Cliffs in 1996. These birds may eventually forage on carrion within the allotment but have not yet been observed doing so. No other federally listed T&E (plant or animal) species are known to occur in the area covered by this EA.

Wildlife

Allotment observations over the years indicate that this area only receives light use by pronghorn antelope and mule deer during any season.

⁴ An ecological site is a distinctive kind of land that differs from other kinds in its ability to produce a characteristic plant community. Each ecological site is a product of all environmental factors responsible for its development. Each site is capable of producing and supporting a plant community typified by an association of species that differs from other ecological sites in species kind, proportion and total production.

Non-game wildlife found on the allotment is typical of the area, including a variety of small mammals, grassland birds, raptors, and reptiles. All water sources within this arid area are important for wildlife.

The Moonshine Allotment supports numerous other wildlife species typical of the sagebrush and pinon/juniper vegetation types, such as bobcats, golden eagles, red-tailed hawks, antelope ground squirrels, plus numerous small reptiles, birds, small mammals, and other raptors. In addition, this allotment provides habitat for numerous species of non-game small mammals, birds, reptiles, raptors and predators, including coyotes. Hunttable populations that occur on this allotment are coyotes, pronghorn and mule deer. Some mountain lions and chuckar may also occur.

The subject area falls within the Clayhole Habitat Management Area. Mammals typical of the area include mule deer, pronghorn, coyote, bobcat, mountain lion, fox, jackrabbit, cottontail rabbit, ground squirrel, and various rodents. Common birds include warblers, wrens, sparrows, jays, woodpeckers, crows and ravens, burrowing owls, red-tailed hawks, and golden eagles. Reptiles include western rattlesnake, great basin gopher snake, and western whiptail, fence, short-horned, and sagebrush lizards.

There is a well ordered pattern of food and community relationships in the climax sagebrush-grass community. Mule deer rely upon the understory browse and forbs in more open areas and use the nearby pinyon/juniper stands for cover. Coyotes, mountain lions, and other predators prey on mule deer and small mammals. Seeds from the forbs and grasses provide food for rodents which in turn are preyed upon by predators both mammal and bird.

BLM Sensitive and State Species of Concern

Ferruginous hawks (*Buteo regalis*) are known to forage over grassland habitat similar to that found on the allotment, though specific sightings have not been recorded for the area. Snowy egrets (*Egretta thula brewsteri*) have occasionally been observed using stock tanks in the area, but have not been recorded on the Moonshine Allotment. A variety of sensitive bat species have been known to occur in the surrounding area, including Townsend's big-eared (*Corynorhinus townsendii*), spotted bats (*Euderma maculatum*), small-footed myotis (*Myotis ciliolabrum*), fringed myotis (*Myotis thysanodes*), and big free-tailed bats (*Nyctinomops macrotis*).

No sensitive reptiles or amphibians are known or suspected to occur on this allotment.

Soils

SCS Soil Survey of Mohave County Area 625(SCS, 1991) Arizona, East of Hurricane Cliffs, 1992

Soil Ecological Sites – 625

- 2 Barx fine sandy loam, 1 to 5 percent slopes, (fan terraces), sandstone; Sandy Loam Upland, 10" to 14" ppt
- 6 Bidonia-Bond-RO complex, 1 to 25 percent slopes, (plateaus, mesas), sandstone; Bidonia-Sandstone Upland (Woodland), 10" to 14" ppt; Bond-Shallow Loamy, 10" to 14" ppt
- 10 Clayhole loam, 1 to 3 percent slopes, (alluvial fans), gyp-shale; Gypsum Upland, 7" to 11" ppt
- 14 Grieta loam, 1 to 5 percent slopes, (fan terraces), sandstone; Loamy Upland, 7" to 11" ppt
- 17 Havasupai-Mellenthin complex, 2 to 12 percent slopes, (fan terraces, hills), limestone; Shallow Loamy, 10" to 14" ppt
- 20 Jocity silty clay loam, 1 to 4 percent slopes, (stream terraces), mixed alluvium; Silty Upland, 7" to 11" ppt
- 23 Kinan-Hatknoll-Grieta complex, 1 to 5 percent slopes, (fan terraces), limestone, basalt, sandstone; Kinan and Grieta-Loamy Upland, 7" to 11" ppt; Hatknoll-Clay Loam Upland, 7" to 11" ppt
- 33 Mellenthin very gravelly loam, 1 to 25 percent slopes, (hills), limestone; Shallow Loamy, 10" to 14" ppt
- 46 Pennell-Bacobi complex, 1 to 7 percent slopes, (hills, fan terraces), limestone; Pennell-Shallow Loamy, 7" to 11" ppt; Bacobi-Loamy Upland, 7" to 11" ppt
- 47 Pennell gravelly loam, 1 to 12 percent slopes, (mesas and hills), limestone; Shallow Loamy, 7" to 11" ppt
- 54 Saido-Brinkerhoff complex, 1 to 5 percent slopes, (fan terraces), gyp-shale, mudstone, sandstone; Saido-Gypsum Upland, 7" to 11" ppt; Brinkerhoff+LoamyUpland, 7" to 11" ppt

Lithology:

Soil in the Moonshine includes primarily Sandy Loam Upland, Loamy Upland and Shallow Loamy range sites. However, there are also hills, fan terraces, mesas and plateaus ranging from one to twenty percent slopes. During the field visit the Interdisciplinary Team examined the seven indicators of Standard #1. Ground cover in the form of litter, live vegetation and rock; signs of erosion, flowpatterns, gullies, rills and plant pedestalling were all found to be within site parameters.

Cultural/Historical

Cultural resources cover the span of human occupation in the new world from around 10,000 years ago, up to and including the ranch operators of today. Our specific knowledge of the cultural makeup is limited due to the lack of scientific investigation of the area. A class I review was conducted and certain sites have been recorded on the allotment, but no known impacts to

significant resources resulting from grazing have been found or documented.

Visual Resources

Visual Resource Management (VRM): Two VRM Classes are found on this allotment: Class 3 and Class 4 VRM areas.

Livestock Grazing

The Moonshine Allotment (#5237) is comprised of 9,725 acres of federal and 320 acres of state land. The total number of active AUMs on the allotment is 824.

Recreation Resources

The Moonshine allotment is considered to have recreation values for its geology, scenic view sheds, remoteness and solitude. General recreation activities may include: recreational OHV use, driving for pleasure, horseback riding, hiking, camping, hunting, and photography.

Areas of Critical Environmental Concern: Moonshine Ridge⁵ (5,500 acres) Cultural and T&E species values. Proposed Cultural Resources Management Plan – Plan has not been done yet.

Off Highway Vehicles: The Moonshine allotment has two classifications for OHV use: Limited to Existing Roads and Trails, and Limited to Designated Roads and Trails.

Recreation Opportunity Spectrum: The area within this allotment was classified as “SemiPrimitive Non-Motorized,” “Semi-Primitive Motorized,” and “Roaded Natural.”

Visual Resource Management (VRM): The area within the Moonshine allotment has been classified as Class 3 and 4 VRM areas.

Trails: The Dominguez-Escalante Party is presumed to have come through the area near Moonshine allotment, although the party’s route is shown on the Arizona Strip’s Visitor Map as a historic trail, the exact route is not known and no trail markers are found on the ground in this area.

Wilderness, Wild and Scenic Rivers: No designated wilderness areas or wild and scenic rivers or resources in this allotment.

Socio/Economic

⁵ Portions of the Moonshine grazing allotment fall within the boundaries of the Moonshine ACEC. However, the habitat for Siler Pincushion Cactus within the ACEC, falls outside the boundaries of the Moonshine grazing allotment. There are no cacti, nor it’s habitat, within the Moonshine allotment.

The economic base of the Arizona Strip is mainly ranching with a few gypsum/selenite mines and uranium operations. Nearby communities are supported by tourism (including outdoor recreation), construction and light industry. The social aspect involves remote, unpopulated settings with moderate to high opportunities for solitude.

Noxious Weeds

There is a very small patch of Scotch thistle (20 plants) in the far Southwest corner of the Heaton-Findlay pasture. Past treatment work has kept the infestation from spreading beyond its existing location. However, a concerted effort using herbicide treatments and hand grubbing must continue to eradicate and stop the spread.

IV. ENVIRONMENTAL IMPACTS

Only impacts that may result from implementing the proposed action or alternatives are described in this EA. If an ecological component is not discussed, it is because BLM resource specialists have considered effects to the component and found the proposed action or alternatives would have minimal or no effects.

General effects from projects similar to the proposed action or alternatives are also described in the documents to which this EA is tiered.

This EA incorporates by reference the Moonshine Allotment S&G Assessment and Appendix (2003) that provides a complete discussion, analysis and summaries of the range resources and associated data and issues.

Climate

The Proposed Action would have no effect on the climate. However, the Proposed Action would allow affected resources to respond to the climate with improvement to these resources, as mentioned below in the drought and vegetation sections.

Drought

In response to drought conditions, BLM can modify the terms and conditions of a grazing permit (i.e. number of cattle, turn out dates, removal dates, etc.) temporarily or on a more long-term basis. Most modifications are accomplished on a cooperative basis with the livestock permittee. However, if a permittee disagrees with BLM's assessment of the resource conditions or the necessary modifications, BLM may nevertheless issue a Full Force and Effect Grazing Decision to protect resources.

Vegetation

Grazing impacts on vegetation are mitigated by timing of use, adjusting of stocking rates, and

conformance with Standards and Guidelines for Grazing Management. Under current management the grazing system is designed to allow for different seasons of use and rest, allowing cool and warm season grasses and browse to elongate the plants apical bud, build vigor and achieve seed ripe.

Trend data of the Moonshine allotment, vegetation components indicate that three key areas are in upward trend and three are in static trend as a result of current management and precipitation. These vegetation components constitute the ecological sites upon which DPC objectives are based. Key areas are established on ecological sites and studied to determine the ecological status⁶ of that site and the trend of plant species on the site.

Table 1 lists pastures and key areas, the ecological site of the key areas, current ecological status and associated similarity indexes. Also, listed is the current trend of the vegetation based on pace-frequency studies.

Table 1

Allotment (Pasture)	Key Area	Ecological Site	Ecological Status	Similarity Index	Frequency Trend
Moonshine (Moonshine)	#4	Sandy Loam Upland 7-11" pz	Late Seral	55%	Upward
Moonshine (Moonshine)	#5	Sandy Loam Upland 7-11" pz	Late Seral	62%	Upward
Moonshine (Sims)	#6	Limy Slopes 10-14" pz	Late Seral	60%	Upward

⁶Ecological status is the present state of vegetation of an ecological site in relation to the potential plant community for that site. It expresses the relative degree to which the kinds, proportions, and amounts of plants in a plant community resemble that of the potential natural plant community for the site. Ecological status is a coefficient of community similarity, which gives an ecological rating of the plant community. Ecological status is also defined in seral stages, which are the developmental stages of ecological succession. The four ecological status classes correspond to percent similarity to potential natural community and correlate with seral stage ratings.

Early Seral Stage (0-25%)
 Mid Seral Stage (26-50%)
 Late Seral Stage (51-75%)
 Potential Natural Community (76-100%)

Moonshine (Sims)	#7	Limy Upland 10-14" pz	Late Seral	62%	Static
Moonshine (Heaton-Findlay)	#8	Limy Upland 10-14" pz	Late Seral	54%	Static
Moonshine (Heaton-Findlay)	#9	Shallow Loamy 7-11" pz	Late Seral	72%	Static

Utilization⁷ levels during the analysis period have been below the 50 percent allowable level. During the evaluation period, average utilization across all pastures for Cool Season grasses was 32 percent, ranging between 10 percent and 48 percent. For the Warm Season grasses the average was 26 percent, ranging from 5 percent to 42 percent. The Browse averaged 27 percent and all browse species ranged from 10 percent to 47 percent

Current grazing is operated under a deferred-rotation management system. These pastures are generally used in the fall, winter, and spring and often times removed during the summer and taken to private pasture.

Threatened and Endangered Species(T&E)

The Proposed Action Alternative would not affect any listed threatened or endangered species nor would the proposed action impact an occasional fly over by the bald eagle, California condor, or peregrine falcon.

BLM Sensitive and State Species of Concern.

The Proposed Action would have no affect on BLM sensitive and state species of concern. These species include the avian species, Ferruginous hawk, western burrowing owl and snowy egret and sensitive bat species such as Townsend's big eared, spotted bats, small-footed myotis, fringed myotis and big free-tailed bats.

Wildlife

The Proposed Action would have no substantial impacts on any objectives for meeting wildlife habitat needs that are provided for in habitat management plans (HMPs) written for specific

⁷Utilization is the portion or degree by weight of current years forage production that is consumed or destroyed by animals (including insects). Utilization is synonymous with use.

geographic regions. The Clayhole Habitat Management Plan provides management direction for this area. This plan primarily addresses the needs of threatened, endangered, or sensitive species and big game animals, and is currently being revised.

The Proposed Action would have no substantial impacts on big game(mule deer) or the other nongame wildlife found on the allotment. Observations and studies over time have indicated that this area receives only light use by mule deer, primarily as transitional habitat between summer and winter range.

The Proposed Action would have no substantial impacts on Pronghorn Antelope. Observations and studies over time have indicated that these this area receives light to moderate use by pronghorn, which may occupy or transition back and forth between areas. Fences can impact pronghorn antelope. According to recent fence inventory by the Arizona Game and Fish Department, this area within the allotment does meet the standards for antelope passable fences. Any maintenance or replacement fences will be built in compliance. But none are proposed at this time.

The lack of fawning cover near the dry reservoir (Southern tip) is indeed minor, because of this negligible affect on the overall pronghorn habitat and fawning cover within this allotment or even overall fawning success of the entire pronghorn herds is slight to none. This area is a dry lake bed of less than 2 acres and occasionally collects and stands water, therefore it drowns out the plants and won't support any long term perennial vegetative growth other than annuals. This site cannot be drained and is certainly not caused by livestock or grazing and altering the management of the livestock will not change it.

There are other waters nearby which are more desirable for pronghorn antelope fawning areas and sites that are certainly being used by the pronghorn.

Migratory Birds

Executive Order 13186 requires BLM and other federal agencies to work with the U.S. Fish and Wildlife Service to improve protection for migratory birds. Implementation of the proposed action is not likely to adversely affect any species of migratory bird known or suspected to occur on the allotment. No take of any such species is anticipated.

Soils

Attributes making up the soil resource should remain stable or improve thru implementation of the Proposed Action Alternative and enforcement of the Arizona Standards and Guides process for permitted livestock grazing within the Moonshine Grazing Allotment. The current grazing rotation allows for seasonal plant rest and vigor. Utilization levels are within that allowable and current trends are up.

Soil in the Moonshine includes primarily Sandy Loam Upland, Loamy Upland and Shallow

Loamy range sites. However, there are also hills, fan terraces, mesas and plateaus ranging from one to twenty percent slopes.

Cultural Resources

There would be no substantial impact to cultural or historical sites as a result of renewing this grazing permit. Cultural resources project file AZ BLM 110-2005-070 contains documentation of compliance with Section 106 of the National Historic Preservation Act. Great efforts are made to avoid any sites during allotment project implementation. Further, archaeological clearances are completed prior to any and all project approvals.

Livestock Grazing

Under the Proposed Action livestock grazing would continue and the permittee would be allowed to continue in the livestock business.

Recreation Resources

Recreation in the area is primarily composed of driving for pleasure, recreational OHV use, horseback riding, hiking, camping, hunting, and photography. No impact to recreation is expected.

Noxious Weeds

There is a very small patch of Scotch thistle (20 plants) in the far Southwest corner of the Heaton-Findlay pasture that is being controlled and monitored. Previous treatment work has kept the infestation from spreading beyond its existing location. However, a concerted effort using herbicide treatments and hand grubbing must continue to eradicate and stop the spread of this noxious weed.

Cumulative Impacts

Cumulative Impacts are tiered to the Arizona Strip RMP (1992), Environmental Consequences pages IV-36 to IV-38, and to chapter 4 of the Vermillion Grazing EIS (1979) which was adopted into the RMP. Unavoidable Adverse Impacts, Relationship between Local Short-term Uses of Man's Environment, Maintenance and Enhancement of Long-term Productivity, and the Irreversible and Irretrievable Commitments of Resources were discussed.

Cumulative impacts occur when additional management facilities are added to those already present. Grazing plans are intended to meet specific objectives to the plan area and involve rangeland improvements that are designed to maintain or improve wildlife habitat, watershed, and overall resource conditions, thus improving ecosystem health.

Residual Impacts

Residual Impacts are tiered to the Arizona Strip RMP (1992), Irreversible and Irretrievable Commitments of Resources page 172 of the Vermillion Grazing EIS (1979) which was adopted into the RMP. Though the proposed action doesn't propose any new fences, it does allow for the existence of present fence lines, which do create some restrictions of free passage, but do not prevent passage of mule deer. Existing fences are pronghorn compliant. Other wildlife using the area are not restricted by existing fences.

Monitoring

The monitoring described in the proposed action (page 7) is sufficient to identify changes in vegetation as a result of livestock grazing activities. In addition to those methods described, there are efforts in place to inventory for noxious weed establishment, as well as monitor treated areas for treatment effectiveness. BLM Arizona Strip Field Office noxious weed specialist has the lead on monitoring and treating noxious weeds for this area.

Mitigation

When noxious weeds are located, various methods are used for their control depending on the size of the infestation and growth stage of the plants. The methods include but are not limited to:

- Physical or mechanical
- Biological
- Chemical

If vegetative monitoring indicates current livestock grazing practices are causing non-attainment of resource objectives, BLM can modify the terms and conditions of a grazing permit (ie. number of cattle, turn out dates, removal dates, etc.) temporarily or on a more long-term basis. Most modifications are accomplished on a cooperative basis with the livestock permittee. However, if a permittee disagrees with BLM's assessment of the resource conditions or the necessary modifications, BLM may nevertheless issue a Full Force and Effect Grazing Decision to protect resources.

V. CONSULTATION AND COORDINATION

This EA was prepared by the Bureau of Land Management (BLM), Arizona Strip Field Office, 345 E. Riverside Drive, St. George, UT 84790. Public involvement for the Moonshine S&G evaluation began January 14, 2003. The assessment was conducted by an interdisciplinary assessment team (IAT) of resource specialists from the BLM. The IAT was assisted by the Rangeland Resources Team (RRT) appointed by the Arizona Resource Advisory Council. A draft evaluation was sent out for public review and comment to Individuals, Groups and Agencies. Comments from Individuals, Groups and Agencies were incorporated in to the Final Moonshine S&G evaluation report.

Interdisciplinary Assessment Team (IAT):

Linda Price.....Project Coordinator
Kevin Schoppmann....Range/Grazing
John Herron.....Archaeologist
Robert Smith....Soils, Watershed
Larry Gearhart.....Wilderness/Recreation
Michael Herder.....Wildlife Biologist

Internal Reviewers:

Gloria Benson, Native American Coordinator
Tom Folks, Recreation
Laurie Ford, Lands/Realty/Minerals
Michael Herder, Wildlife Team Lead
John Herron, Cultural
Lee Hughes, Plants/Ecology
Ron Wadsworth, Supervisory Law Enforcement
Linda Price, S&G Program Coordinator
Bob Sandberg, Range Team Lead/Arizona Strip Field Office Manager
Richard Spotts, Environmental Coordinator
Ray Klein, GCPNM Supervisory Law Enforcement
Larry Gearhart, Recreation/Visual/Wilderness

Reviewed by Planning and Environmental Coordinator(P&EC):

Richard Spotts
P&EC

Date

FINDING OF NO SIGNIFICANT ENVIRONMENTAL IMPACT

Implementation of the Arizona Standards for Rangeland Health and Guidelines
for Grazing Management for the Moonshine Grazing Allotment Permit Renewal

RE: AZ-EA-110-2005-0049

The Environmental Assessment AZ-110-2005-0049, hereby incorporated by reference, analyzed a livestock grazing permit renewal action conducted under the Arizona BLM Standards for Rangeland Health and Guidelines for Grazing Management (S&Gs) where an intensive allotment evaluation was conducted with public and other agency involvement throughout the process. Analysis of existing study data indicates that overall Ecological Condition and pace frequency trends are static and mostly upward on the allotment. The resource conditions on the allotment are meeting Standards for Rangeland Health. Issues were analyzed and it was determined that current management is not a factor in preventing attainment of Standards.

The Environmental Assessment reaffirmed the present Allotment Management Plan (AMP), and determined that the present grazing management program will continue to allow improvement to the health of public land resources, such as soil, water, vegetation, wildlife habitat, and wildlife and other resource values.

Based on the analysis of Environmental Assessment AZ-110-2005-0049, I have determined that the renewal of the Moonshine Livestock Grazing Permit with current terms and conditions will not have a significant effect on the human environment. Therefore, an environmental impact statement will not be prepared.

Field Manager
Arizona Strip Field Office

Date